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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,698	09/26/2001	Makoto Misaka	1232-4767	6446

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EXAMINER
NGUYEN, THONG Q

ART UNIT	PAPER NUMBER
2872	16

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/966,698	Applicant(s) MISAKA, MAKOTO	
	Examiner Thong Q. Nguyen	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2003 and 31 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11* is/are allowed.

6)☒ Claim(s) *1-4,6 and 8-10* is/are rejected.

7)☒ Claim(s) *5 and 7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 31, 2003 has been entered.

Response to Amendment

2. The present Office action is made in response to the amendment (Paper No. 11) filed on 3/3/2003 and the communication (Paper No. 15) filed on 3/31/2003.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3-4, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,025,962, of record) in view of Otake (U.S. Patent No. 5,946,145).

Suzuki discloses a zoom lens system for use with an optical apparatus (see columns 1-2) wherein the zoom lens system comprises five lens units arranged in an order from an object side as follow: a first positive lens unit, a second negative lens unit, a third positive lens unit, a fourth negative lens unit and a fifth positive lens unit. In a zooming process from a wide angle to a telephoto position,

the distance between the first and second lens units is increased; the distance between the second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. In an image stabilization process, the fourth lens unit is moved in a direction perpendicular to the optical axis of the zoom lens system. See figures 1 and 4 and columns 14-16. While Suzuki discloses that the fourth lens unit is moved for compensating image vibrations, he does not disclose that only the negative lens component of the fourth lens unit is moved for compensating image vibrations.

However, the decenter an entire or a part of the entire lens unit in a zoom lens system having five lens groups in a direction perpendicular to the optical axis of the zoom lens for compensating image vibrations is known to one skilled in the art as can be seen in the zoom lens system provided by Otake. In particular, Otake discloses a zoom lens system having five lens groups and teach that the fourth lens group or a part of the fourth lens group is used as a shifted/compensating unit in a direction perpendicular to the optical axis of the zoom lens system. See column 13, lines 41+ and column 14, lines 41+. Even though the fourth lens group or a part of the fourth lens group being decentered has a positive power; however, one of ordinary skill in the art would recognize that what is critical is the geometry of the lens group being decentered not the positive or negative refracting power of the lens group. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the

five-unit zoom lens of Suzuki by decentering/moving only the part of lens group as suggested by Otake for the purpose of compensating image vibrations and simultaneously reducing the power consumption.

5. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Otake as applied to claims 1 and 9 above, and further in view of Yamamoto (of record).

The combined product as provided by Suzuki and Otake as described in the paragraph 4) above does not state that a photoelectric conversion element is disposed for receiving the image provided by the zoom lens. However, such use of a photoelectric conversion element for receiving an image provided by the zoom lens is considered as an inherent feature form the system provided by Suzuki. If it is not inherent then the use of an optical apparatus having a zoom lens of five lens units and a charged-coupled device located to receive the image provided by the zoom lens is clearly disclosed in the art of Yamamoto. See column 1, for example. Thus, it would have been obvious to one skilled in the art at time the invention was made to utilize a charged-coupled device positioned after a zoom lens as suggested by Yamamoto in the optical apparatus having a zoom lens with image compensating function provided by Suzuki and Otake for the purpose of receiving the image formed by the zoom lens.

6. Claim 1, 3-4, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama (U.S. Patent No. 4,498,741, of record) in view of Suzuki (U.S. Patent No. 6,025,962, of record) and Otake (U.S. Patent No. 5,946,145).

Ishiyama discloses a zoom lens system having five lens units of a first positive power, a second negative power, a third positive power, a fourth negative power and a fifth positive power arranged in that order from an object side. During a zooming process, from a wide angle to a telephoto position, the distance between the first and second lens units is increased; the distance between the second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. See columns 2-3 and the first embodiment. However, Ishiyama does not teach that the fourth lens unit is decentered with respect to the optical axis for the purpose of compensating image blurs caused by vibrations. The use of a compensating mechanism for decentering a lens unit for the purpose of compensating image blurs caused by vibrations is known in the art. For instance, Suzuki discloses a zoom lens system for use with an optical apparatus (see columns 1-2) wherein the zoom lens system comprises five lens units arranged in an order from an object side as follow: a first positive lens unit, a second negative lens unit, a third positive lens unit, a fourth negative lens unit and a fifth positive lens unit. In a zooming process from a wide angle to a telephoto position, the distance between the first and second lens units is increased; the distance between the second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. In an image stabilization process, the fourth lens unit is moved in a direction perpendicular to

the optical axis of the zoom lens system. See figures 1 and 4 and columns 14-16. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the zoom lens system provided by Ishiyama by decentering the fourth lens unit as suggested by Suzuki for the purpose of compensating image blurs caused by vibrations.

The combined product as provided by Ishiyama and Suzuki does not disclose that only a part of the lens unit is decentered in the image compensating process; however, the movement of the whole lens unit or just a part of the lens unit in an image compensating process is known to one skilled in the art as can be seen in the system provided by Otake. In particular, Otake discloses a zoom lens system having five lens groups and teach that the fourth lens group or a part of the fourth lens group is used as a shifted/compensating unit in a direction perpendicular to the optical axis of the zoom lens system. See column 13, lines 41+ and column 14, lines 41+. Even though the fourth lens group or a part of the fourth lens group being decentered has a positive power; however, one of ordinary skill in the art would recognize that what is critical is the geometry of the lens group being decentered not the positive or negative refracting power of the lens group. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the five-unit zoom lens provided by Ishiyama and Suzuki by decentering/moving only the part of lens component having negative power as suggested by Otake for the purpose of compensating image vibrations and simultaneously reducing the power consumption.

7. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Suzuki and Otake as applied to claims 1 and 9 above, and further in view of Yamamoto.

The combined product as provided by Ishiyama, Suzuki and Otake does not clearly state that the system comprises an electronic conversion element disposed for receiving the image provided by the zoom lens. However, such use of a photoelectric conversion element for receiving an image provided by the zoom lens is considered as an inherent feature form the system provided by Suzuki. If it is not inherent then the use of an optical apparatus having a zoom lens of five lens units and a charged-coupled device located to receive the image provided by the zoom lens is clearly disclosed in the art of Yamamoto. See column 1, for example. Thus, it would have been obvious to one skilled in the art at time the invention was made to utilize a charged-coupled device positioned after a zoom lens as suggested by Yamamoto in the optical apparatus having a zoom lens with image compensating function of Ishiyama, Suzuki and Otake for the purpose of receiving the image formed by the zoom lens.

Allowable Subject Matter

8. Claim 11 is allowed over the cited art.

9. Claims 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-11, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The additional reference is cited as of interest in that it discloses a zoom lens system having five lens group wherein a part of the fourth lens group is used as a compensating lens unit.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (703) 308-4814. The examiner can normally be reached on M-F.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

Thong Q. Nguyen
Primary Examiner
Art Unit 2872

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April 8, 2003